



(51) International Patent Classification:

C07D 207/08 (2006.01) C07D 213/74 (2006.01)
 C07D 207/09 (2006.01) C07D 231/20 (2006.01)
 C07D 213/61 (2006.01) C07D 401/04 (2006.01)
 C07D 213/62 (2006.01) C07D 401/14 (2006.01)
 C07D 213/70 (2006.01) C07D 513/22 (2006.01)

(21) International Application Number:

PCT/US2020/046116

(22) International Filing Date:

13 August 2020 (13.08.2020)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

62/886,660 14 August 2019 (14.08.2019) US

(71) Applicant: VERTEX PHARMACEUTICALS INCORPORATED [US/US]; 50 Northern Avenue, Boston, Massachusetts 02210 (US).

(72) Inventors: ANGELL, Paul; 50 Northern Avenue, Boston, Massachusetts 02210 (US). COCHRAN, John E.; 50 Northern Avenue, Boston, Massachusetts 02210 (US). LITTLER, Benjamin J.; 50 Northern Avenue, Boston, Massachusetts 02210 (US). SIESEL, David Andrew; 50 Northern Avenue, Boston, Massachusetts 02210 (US). URBINA, Armando; 50 Northern Avenue, Boston, Massachusetts 02210 (US). ANDERSON, Corey Don; 50 Northern Avenue, Boston, Massachusetts 02210 (US). CLEMENS, Jeremy J.; 50 Northern Avenue, Boston, Massachusetts 02210 (US). CLEVELAND, Thomas; 50 Northern Avenue, Boston, Massachusetts 02210 (US). COON, Timothy Richard; 50 Northern Avenue, Boston, Massachusetts 02210 (US). FRIEMAN, Bryan; 50 Northern Avenue, Boston, Massachusetts 02210 (US).

(72) Inventor: GROOTENHUIS, Peter (deceased).

(72) Inventors: HADIDA RUAH, Sara Sabina; 50 Northern Avenue, Boston, Massachusetts 02210 (US). MCCARTNEY, Jason; 50 Northern Avenue, Boston, Massachusetts 02210 (US). MILLER, Mark Thomas; 50 Northern Avenue, Boston, Massachusetts 02210 (US).

Avenue, Boston, Massachusetts 02210 (US). PARASEL-LI, Prasuna; 50 Northern Avenue, Boston, Massachusetts 02210 (US). PIERRE, Fabrice; 50 Northern Avenue, Boston, Massachusetts 02210 (US). SWIFT, Sara E.; 50 Northern Avenue, Boston, Massachusetts 02210 (US). ZHOU, Jinglan; 50 Northern Avenue, Boston, Massachusetts 02210 (US).

(74) Agent: MCDONELL, Leslie A. et al.; Finnegan, Henderson, Farabow, Garrett & Dunner, LLP, 901 New York Avenue, NW, Washington, District of Columbia 20001 (US).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, IT, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

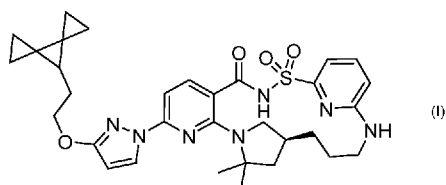
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: PROCESS OF MAKING CFTR MODULATORS

(57) Abstract: The disclosure provides processes for synthesizing Compound I, and pharmaceutically acceptable salts thereof.



Compound

